

this dividing belt had been pushed up northward to northern Wisconsin, central Michigan and Lake Erie. Meanwhile a remarkable series of local storms had occurred over portions of Iowa, Missouri, Illinois, Indiana and Ohio, in the region of warm southeast to southwest winds. These local storms individually moved from southwest to northeast, while the recorded times of their occurrence show that they were successively generated farther and farther to the south and east. At 11 a. m. of the 25th, according to a special dispatch to the Associated Press, storms were prevailing as far east as Peoria and Springfield, Ill., as far south as Springfield, Ill., and as far north as Madison, Wis.; in Iowa the weather was generally clearing, except in the eastern border. By 12:30 or 1 p. m. numerous storms had prevailed over Illinois; between 1 and 4 p. m. they had overrun Illinois; between 3 and 7 p. m. they had overrun Ohio, the last record being 7 p. m., in Guernsey co. A second set of storms occurred after 9 or 10 p. m. over these same States.

VERIFICATIONS.

Indications.—The detailed comparison of the tri-daily weather Indications with the telegraphic weather reports for the succeeding twenty-four hours, shows a general percentage of omissions of 0.25 per cent., and of verifications of 86.5 per cent. Out of 3,591 predictions, 2,582, or 71.9 per cent., have been fully verified; 362, or 19.1 per cent., have been three-fourths verified; 454, or 12.6 per cent., have been one-half verified; 96, or 2.7 per cent., have been one-fourth verified; 97, or 2.7 per cent., have failed. The percentage for the four elements have been: weather, 94.5; wind, 85.2; temperature, 86.5; barometer, 79.6. The percentages of verifications by geographical districts have been: New England, 84.6; Middle Atlantic States, 9.14; South Atlantic States, 83.1; East Gulf States, 89.2; West Gulf States, 90.1; Lower Lakes, 86.6; Upper Lakes, 82.0; Tennessee and the Ohio valley, 86.1; Upper Mississippi valley, 85.0; Lower Missouri valley, 85.1.

Cautionary Signals.—During the month 74 Cautionary Signals have been displayed at stations on the Gulf and Atlantic coasts and the Lakes. Of these 59, or 80 per cent., were justified by subsequent high winds within one hundred miles of the stations for which they were ordered, and 15, or 20 per cent., were not justified so far as known. Sixty one instances of high winds, when no signals were displayed, have also been reported from these stations. Telegraphic communication with the North Carolina coast-stations has continued interrupted during the month.

NAVIGATION.

Stages of Water.—In the table on chart No. III are given the highest and lowest readings on the river-gauges for the month. It will be seen that the Red river remained moderately high during the month at Shreveport, the water reaching its highest stage on the 23rd. The Cumberland reached its maximum height at Nashville on the 17th, and was generally low during the month. The Ohio was lowest from the 3rd to the 9th, after which several small freshet waves, the results of heavy showers, passed down; the most important of these was that which reached Cincinnati on the 23rd and Louisville on the 26th. The Mississippi continued moderately high during the month from Keokuk down, although the water did not rise to any dangerous heights. The nearest approach to the "danger-line" was at Vicksburg on the 1st; but the river fell slowly at this point until the 10th. Above Keokuk no important changes occurred, and the channel continued sufficiently deep for navigation. The Missouri has remained very high at most points during the entire month. At Corinth, Mo., on the 13th, the water was higher than it had been since July 5th, 1873, flats, lumber-yards and smelting-works were flooded, extinguishing the fires in the latter, without doing serious damage. 10th, overflows at Independence, Kan. 11th, overflows in the Elkhorn in Nebraska and the Arkansas at Little Rock.

Ice-bergs were reported on the 9th lat. 43° 44' N., long. 49° W.; on the 10th, lat. 43° 19' N., long. 48° 53' W.

TEMPERATURE OF WATER.

In General.—The temperature of water, as observed in rivers and harbors, is shown in the small table on chart No. II. The average temperatures have been lowest at Eastport, 39°; Marquette, 44.5. They have been highest at Augusta, 81°; Charleston, 78.5; Galveston, 78.5; Jacksonville, 77.5; Knoxville, 78; Mobile, 82.5; Montgomery, 81.5; Nashville, 78.5; St. Louis, 74.5; St. Marks, 77; Savannah, 78; Wilmington, 79.

Maximum and Minimum Temperatures.—The highest maxima have been: Jacksonville, 85°; Augusta, 86; Galveston, Mobile and Montgomery, 87. The lowest minima have been: Duluth, 45°; Marquette, 42; Eastport, 37.

Ranges of Temperature.—The least ranges have been: Eastport, 4°; Marquette, 5. The greatest ranges have been: Galveston, 17°; New London, 16; Jacksonville, 15; Omaha, St. Paul and Yankton, 14.